

TO: ALL REGENCY COMMUNICATIONS PROFESSIONAL SALES & SERVICE CENTERS  
ALL REGENCY COMMUNICATIONS PROFESSIONAL SALES REPRESENTATIVES

MODELS AFFECTED: MA-312, MA-313

SYMPTOMS: COMMAND OR DISPLAY DATA NOT CORRECT AT ALL TIMES.  
A TYPICAL PROBLEM WOULD BE THE FALSE RECEPTION OF A  
"B" OPTION COMMAND AT THE BASE STATION WHEN AN IDLING  
MA-312 IS LEFT IN THE "MONITOR" MODE.

CAUSE: DYNAMIC RANGE OF TONE DETECTORS NOT GREAT ENOUGH.

PRODUCTION CHANGES:

MA-312: R725 changed from 1M ohm to 560K ohm.  
MA-313: R2308 changed from 1M ohm to 560K ohm.

SOLUTION:

Change R725 and R2308 to 560K ohm, 1/4W, (Regency P/N 4704-0564-032).  
No adjustments are necessary.

SERVICE MANUAL CHANGES:

Replace pages 29, 36, 56, 67 in the Digital Tone Remote System  
Service Manual, 0300-4280-100.

TECHNICAL SERVICE DEPARTMENT  
REGENCY COMMUNICATIONS, INC.





<u>LOCATION</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>ZONE</u>
R627	220K	4704-0224-032	D3
R628	10K	4704-0103-032	D4
R629	1 meg	4704-0105-032	D3
R630	100K	4704-0104-032	D3
R631	100K	4704-0104-032	C3
R632	10K	4704-0103-032	D5
R633	100K	4704-0104-032	C3
R634	1 meg	4704-0105-032	C3
R635	1 meg	4704-0105-032	C3
R636	10K	4704-0103-032	C3
R637	47K	4704-0473-032	C3
R638	1 meg	4704-0105-032	C3
R639	500K, 20T res var	4751-5429-005	C2
R640	470K	4704-0474-032	C2
R641	not used		
R642	100K	4704-0104-032	C2
R643	1.2 meg	4704-0125-032	C2
R644	4.7K	4704-0472-032	C2
R645	100K	4704-0104-032	C2
R646	4.7K	4704-0472-032	C2
R647	10K trim pot res var	4751-0103-001	C2
R648	100K	4704-0104-032	C4
R649	10K	4704-0103-032	D3
R650	1.5K	4704-0152-032	C5
R651	10K	4704-0103-032	C5
R652	1.5K	4704-0152-032	C5
R653	10K	4704-0103-032	B5
R654	1.5K	4704-0152-032	B5
R655	10K	4704-0103-032	B5
R656	1.5K	4704-0152-032	B5
R657	10K	4704-0103-032	B5
R658	1.5K	4704-0152-032	B5
R659	10K	4704-0103-032	B5
R660	1.5K	4704-0152-032	A5
R661	10K	4704-0103-032	A5
R662	4.7K	4704-0472-032	B5
R663	2.2 meg	4704-0225-032	A5
R664	2.2 meg	4704-0225-032	B5
R665	1 meg	4704-0105-032	A5
R666	1 meg	4704-0105-032	A5
R667	220K	4704-0224-032	A5
R668	1K	4704-0102-032	A5
R669	220K	4704-0224-032	A5
R670	470, $\frac{1}{2}$ W	4704-0471-034	A5
R671	470, $\frac{1}{2}$ W	4704-0471-034	A5
R672	470, $\frac{1}{2}$ W	4704-0471-034	A5
R673	100K	4704-0104-032	A4
R674	100K	4704-0104-032	A3
R675	not used		
R676	220K	4704-0224-032	B4
R677	500K, 20T res var	4751-5429-005	B4
R678	1 meg	4704-0105-032	B4
R679	100K	4704-0104-032	C4
R680	10, 1W	4700-0100-045	B4
R681	not used		
R682	2.2K	4704-0222-032	B3



<u>LOCATION</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>ZONE</u>
R683	10K	4704-0103-032	B3
R684	120	4704-0121-032	B4
R685	2.7	4704-0279-032	B4
R686	680	4704-0681-032	A4
R687	not used		
R688	5K slide pot	4752-0502-001	B3
R689	470	4704-0471-032	A3
R690	10K	4704-0103-032	A3
R691	1 meg	4704-0105-032	C3
R692	2.2 meg	4704-0225-032	C3
R693	10K	4704-0103-032	D3
R694	1 meg	4704-0105-032	A3
R695	not used		
R696	1 meg	4704-0105-032	C3
R697	22K	4704-0223-032	C3
R698	22K	4704-0223-032	B3
R699	not used		
R700	4.7K	4704-0472-032	B3
R701	100K	4704-0104-032	B3
R702	1 meg	4704-0105-032	B3
R703	100K	4704-0104-032	A3
R704	3.3 meg	4704-0335-032	A3
R705	4.7K	4704-0472-032	A3
R706	47K trim pot res var	4751-0473-001	A3
R707	100K	4704-0104-032	A3
R708	100K	4704-0104-032	A3
R709	1 meg	4704-0105-032	A3
R710	68K	4704-0683-032	A3
R711	100K	4704-0104-032	A3
R712	10K trim pot res var	4751-0103-001	A3
R713	100K	4704-0104-032	A2
R714	2.2 meg	4704-0225-032	C3
R715	2.7K	4704-0272-032	C3
R716	33K	4704-0333-032	B3
R717	220K	4704-0224-032	C2
R718	100K	4704-0104-032	C2
R719	100K	4704-0104-032	C2
R720	100K	4704-0104-032	C2
R721	301K, RN55	4709-3402-402	C2
R722	301K, RN55	4709-3402-402	C2
R723	301K, RN55	4709-3402-402	B2
R724	301K, RN55	4709-3402-402	B2
R725	560K ohm	4704-0564-032	C2
R726	10K	4704-0103-032	C2
R727	500K, 20T res var	4704-5429-001	C2
R728	100K	4704-0104-032	C2
R729	22J	4704-0223-032	C2
R730	100K	4704-0104-032	C2
R731	10K	4704-0103-032	C2
R732	100K	4704-0104-032	A2
R733	100K	4704-0104-032	A2
R734	1K	4704-0102-032	A2
R735	100K	4704-0104-032	A2
R736	100K	4704-0104-032	A2
R737	100K	4704-0104-032	A2
R738	100K	4704-0104-032	A2



<u>LOCATION</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>ZONE</u>
R2294	100K	4704-0104-032	E1
R2295	22K	4704-0223-032	E1
R2296	10K	4704-0103-032	E1
R2297	100K	4704-0104-032	E1
R2298	10K	4704-0103-032	D2
R2299	1K	4704-0102-032	D2
R2300	56	4704-0560-032	D2
R2301	10K	4704-0103-032	D2
R2302	1K	4704-0102-032	C2
R2303	56	4704-0560-032	C2
R2304	100	4704-0101-032	D2
R2305	1K Trim Pot	4751-3422-601	D2
R2306	100	4704-0101-032	D2
R2307	not used		
R2308	560K ohm	4704-0564-032	E1
R2309	10K	4704-0103-032	E1
R2310	100K	4704-0104-032	G8
R2311	1 meg	4704-0105-032	G7
R2312	47K	4704-0473-032	E4
R2313	1 meg	4704-0105-032	E4
R2314	10K	4704-0103-032	F8
R2315	1 meg	4704-0105-032	D7
R2316	10K	4704-0103-032	D7

#### TRANSISTORS

Q2201-2208	not used		
Q2209	SPS-952	4801-0000-010	D6
Q2210	not used		
Q2211	not used		
Q2212	SPS-952	4801-0000-010	D3
Q2213	MPS-A05	4801-0000-005	D2
Q2214	MPS-A05	4801-0000-005	D2

#### DIODES

CR2201-2213	not used		
CR2214	1N4148	4805-1241-200	F4
CR2215	not used		
CR2216	not used		
CR2217	not used		
CR2218	not used		
CR2219	1N4148	4805-1241-200	E6
CR2220	1N4148	4805-1241-200	D6
CR2221	1N4148	4805-1241-200	C6
CR2222	not used		
CR2223	not used		
CR2224	not used		
CR2225	not used		
CR2226	1N4148	4805-1241-200	D6
CR2227	1N4148	4805-1241-200	E5
CR2228	not used		
CR2229	not used		
CR2230	1N4148	4805-1241-200	G4
CR2231	1N4148	4805-1241-200	F4
CR2232	not used		
CR2233	not used		

<u>LOCATION</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>ZONE</u>
CR2234	not used		
CR2235	not used		
CR2236	not used		
CR2237	1N4148	4805-1241-200	D5
CR2238	1N4148	4805-1241-200	E4
CR2239	1N4148	4805-1241-200	D4
CR2240	1N4148	4805-1241-200	D4
CR2241	1N4148	4805-1241-200	F8
CR2242	1N4148	4805-1241-200	D2
CR2243	1N4148	4805-1241-200	C2
CR2244	1N4148	4805-1241-200	C2
CR2245	1N4148	4805-1241-200	D1
CR2246	1N4148	4805-1241-200	F8
CR2247	1N4148	4805-1241-200	E3
CR2248-49	not used		
CR2250	1N4148	4805-1241-200	D7

INTEGRATED  
CIRCUITS

IC2201	not used		
IC2202	not used		
IC2203	not usee		
IC2204	LM358	3130-3167-909	E4/D7
IC2205	LM358	3130-3167-909	E1/D3
IC2206	MC14001	3130-3157-627	CDE8
IC2207	not used		
IC2208	not used		
IC2209	CD4066	3130-3157-658	DE7
IC2210	not used		
IC2211	not used		
IC2212	not used		
IC2213	MM74C04	3130-3157-617	
IC2214	MM74C04	3130-3157-617	
IC2215	not used		
IC2216	MM74C04	3130-3157-617	

MECHANICAL

PART NUMBER

20 conductor cable	6008-3300-009
P.C. Board	1700-5457-100





<u>LOCATION</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>ZONE</u>
CR2234	not used		
CR2235	not used		
CR2236	not used		
CR2237	1N4148	4805-1241-200	D5
CR2238	1N4148	4805-1241-200	E4
CR2239	1N4148	4805-1241-200	D4
CR2240	1N4148	4805-1241-200	D4
CR2241	1N4148	4805-1241-200	F8
CR2242	1N4148	4805-1241-200	D2
CR2243	1N4148	4805-1241-200	C2
CR2244	1N4148	4805-1241-200	C2
CR2245	1N4148	4805-1241-200	D1
CR2246	1N4148	4805-1241-200	F8
CR2247	1N4148	4805-1241-200	E3
CR2248-49	not used		
CR2250	1N4148	4805-1241-200	D7

INTEGRATED  
CIRCUITS

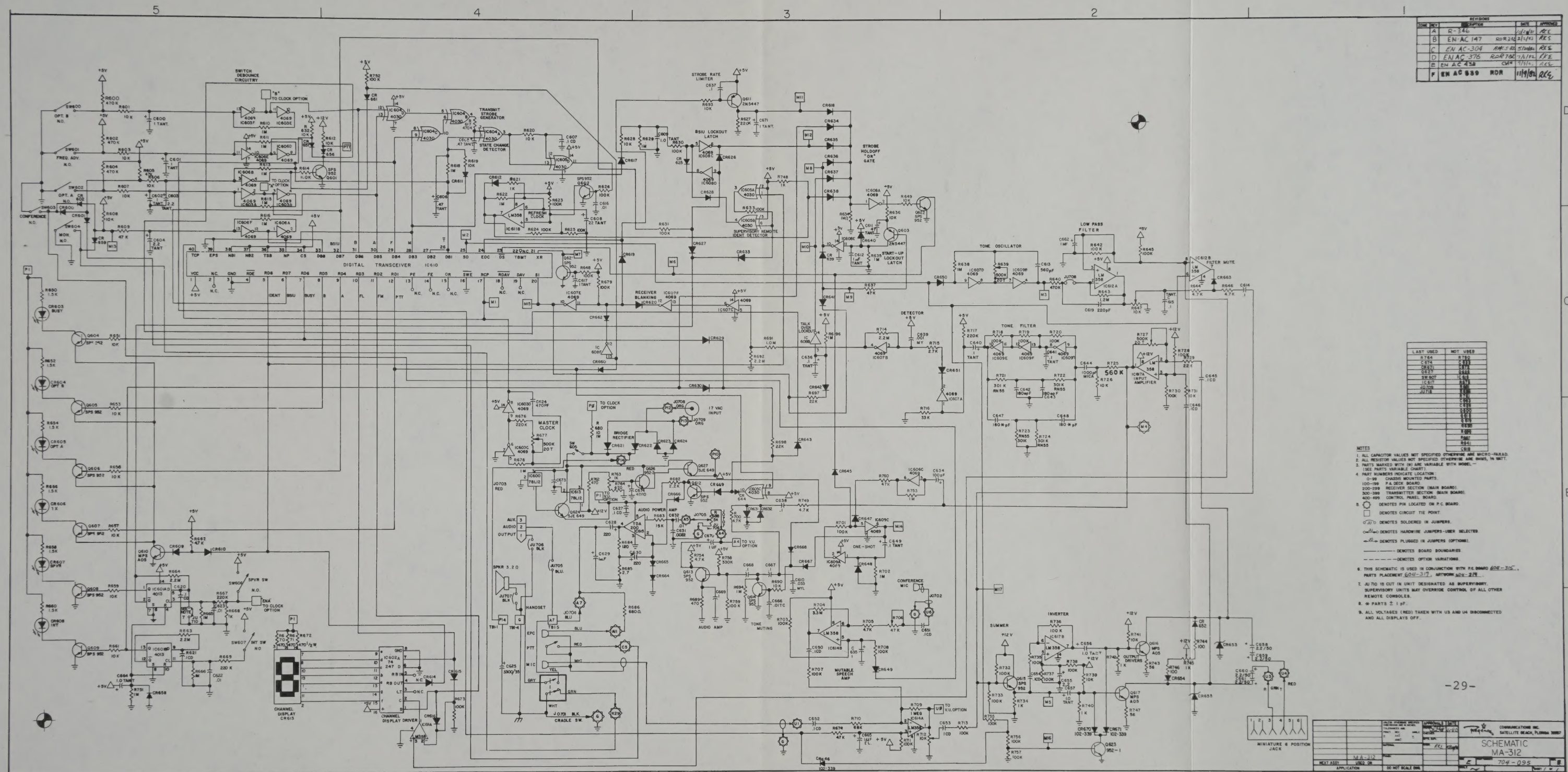
IC2201	not used		
IC2202	not used		
IC2203	not usee		
IC2204	LM358	3130-3167-909	E4/D7
IC2205	LM358	3130-3167-909	E1/D3
IC2206	MCL4001	3130-3157-627	CDE8
IC2207	not used		
IC2208	not used		
IC2209	CD4066	3130-3157-658	DE7
IC2210	not used		
IC2211	not used		
IC2212	not used		
IC2213	MM74C04	3130-3157-617	
IC2214	MM74C04	3130-3157-617	
IC2215	not used		
IC2216	MM74C04	3130-3157-617	

MECHANICAL

PART NUMBER

20 conductor cable	6008-3300-009
P.C. Board	1700-5457-100



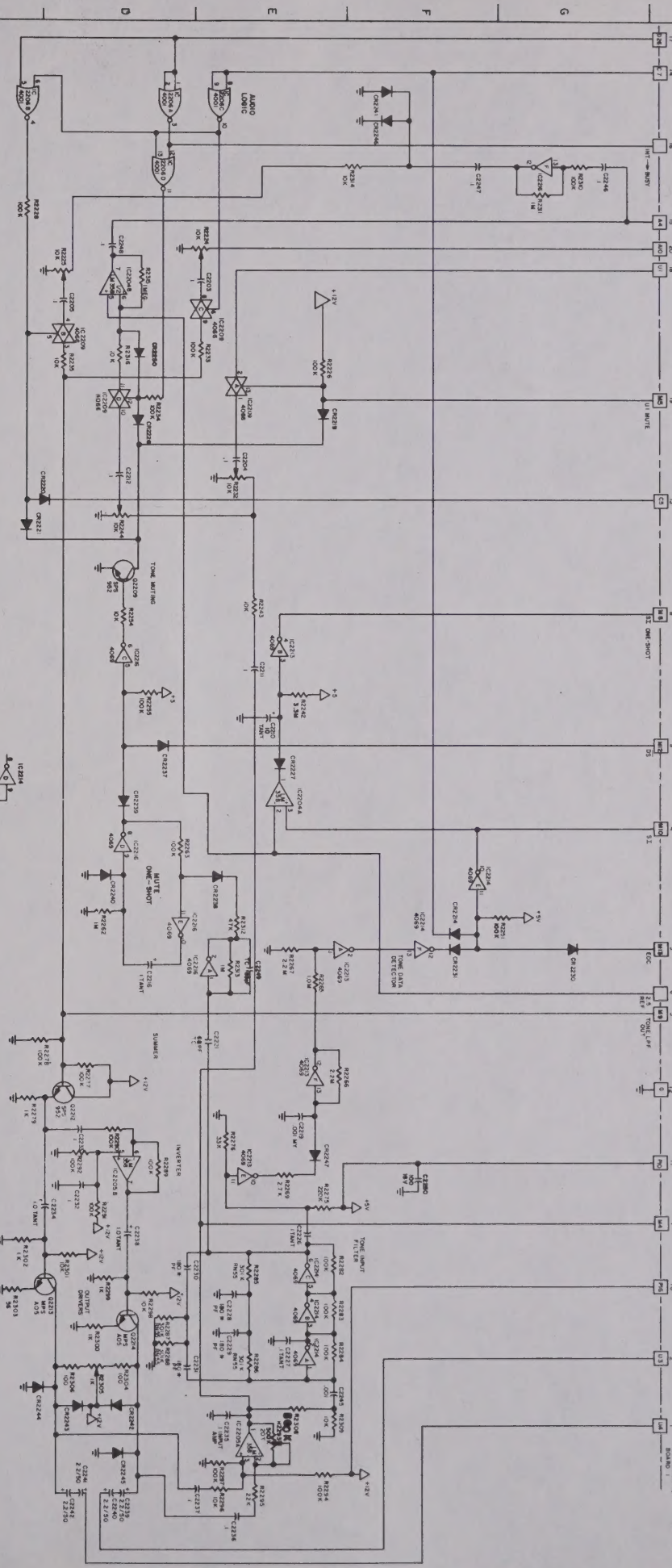








REV	DATE	BY	CHKD	APP'D
1	10/1/68	W.B.		
2	10/1/68	W.B.		
3	10/1/68	W.B.		
4	10/1/68	W.B.		
5	10/1/68	W.B.		
6	10/1/68	W.B.		
7	10/1/68	W.B.		
8	10/1/68	W.B.		
9	10/1/68	W.B.		
10	10/1/68	W.B.		
11	10/1/68	W.B.		
12	10/1/68	W.B.		
13	10/1/68	W.B.		
14	10/1/68	W.B.		
15	10/1/68	W.B.		
16	10/1/68	W.B.		
17	10/1/68	W.B.		
18	10/1/68	W.B.		
19	10/1/68	W.B.		
20	10/1/68	W.B.		
21	10/1/68	W.B.		
22	10/1/68	W.B.		
23	10/1/68	W.B.		
24	10/1/68	W.B.		
25	10/1/68	W.B.		
26	10/1/68	W.B.		
27	10/1/68	W.B.		
28	10/1/68	W.B.		
29	10/1/68	W.B.		
30	10/1/68	W.B.		
31	10/1/68	W.B.		
32	10/1/68	W.B.		
33	10/1/68	W.B.		
34	10/1/68	W.B.		
35	10/1/68	W.B.		
36	10/1/68	W.B.		
37	10/1/68	W.B.		
38	10/1/68	W.B.		
39	10/1/68	W.B.		
40	10/1/68	W.B.		
41	10/1/68	W.B.		
42	10/1/68	W.B.		
43	10/1/68	W.B.		
44	10/1/68	W.B.		
45	10/1/68	W.B.		
46	10/1/68	W.B.		
47	10/1/68	W.B.		
48	10/1/68	W.B.		
49	10/1/68	W.B.		
50	10/1/68	W.B.		
51	10/1/68	W.B.		
52	10/1/68	W.B.		
53	10/1/68	W.B.		
54	10/1/68	W.B.		
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57	10/1/68	W.B.		
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87	10/1/68	W.B.		
88	10/1/68	W.B.		
89	10/1/68	W.B.		
90	10/1/68	W.B.		
91	10/1/68	W.B.		
92	10/1/68	W.B.		
93	10/1/68	W.B.		
94	10/1/68	W.B.		
95	10/1/68	W.B.		
96	10/1/68	W.B.		
97	10/1/68	W.B.		
98	10/1/68	W.B.		
99	10/1/68	W.B.		
100	10/1/68	W.B.		



PACKAGE	PIN NO.
IC 201	1-5/1/8
IC 202	1-5/1/8
IC 203	1-5/1/8
IC 204	1-5/1/8
IC 205	1-5/1/8
IC 206	1-5/1/8
IC 207	1-5/1/8
IC 208	1-5/1/8
IC 209	1-5/1/8
IC 210	1-5/1/8
IC 211	1-5/1/8
IC 212	1-5/1/8
IC 213	1-5/1/8
IC 214	1-5/1/8
IC 215	1-5/1/8
IC 216	1-5/1/8
IC 217	1-5/1/8
IC 218	1-5/1/8
IC 219	1-5/1/8
IC 220	1-5/1/8
IC 221	1-5/1/8
IC 222	1-5/1/8
IC 223	1-5/1/8
IC 224	1-5/1/8
IC 225	1-5/1/8
IC 226	1-5/1/8
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IC 246	1-5/1/8
IC 247	1-5/1/8
IC 248	1-5/1/8
IC 249	1-5/1/8
IC 250	1-5/1/8

- NOTES
1. UNLESS OTHERWISE SPECIFIED, ALL CAPACITOR VALUES ARE IN MICROFARADS.
  2. ALL RESISTOR VALUES ARE IN OHMS, UNLESS OTHERWISE SPECIFIED.
  3. DENOTES THE POINT TO CONNECTOR.
  4. INDICATES SOLDERED IN JUNCTIONS.
  5. PARTS MARKED WITH \* ARE A.I.P.

LAST USED	NOT USED
IC 201	IC 201
IC 202	IC 202
IC 203	IC 203
IC 204	IC 204
IC 205	IC 205
IC 206	IC 206
IC 207	IC 207
IC 208	IC 208
IC 209	IC 209
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IC 249	IC 249
IC 250	IC 250

ENAC533	
DATE	10/1/68
BY	W.B.
CHKD	W.B.
APP'D	W.B.
REV	1
REV	2
REV	3
REV	4
REV	5
REV	6
REV	7
REV	8
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REV	95
REV	96
REV	97
REV	98
REV	99
REV	100

